Castilleja linariifolia

Castilleja

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Take a Tour on the Wild Side this Winter: Species Photo Gallery

You can take a virtual tour of plants in the wild any time this winter, thanks to a new Species Photo Gallery. Two University of Wyoming teams partnered up to create an online photo gallery featuring Wyoming's wild plants and animals, with current content covering almost half of the state flora. They represent over 7000 photos taken by over 200 photographers, available at: https://wyndd.org/gallery/ .

Photos can be searched in the Gallery by common name or a scientific name. It incorporates the core set of species photos provided by Robert and Jane Dorn to the Rocky Mountain Herbarium (RM), photos in the Wyoming Field Guide (https://fieldguide.wyndd.org/) and many more common plant species.

The Photo Gallery was launched with the support of the University of Wyoming Data Hub (https://datahub.uwyo.edu/), as the first of a set of new tools allowing broader audiences to discover the flora of Wyoming. BH

What is on YOUR stocking wish list? If it includes a Management Plan for rare plant species conservation at the Blowout Penstemon Area of Critical Environmental Concern (ACEC) – you're in luck! This ACEC Management Plan is posted at:

https://eplanning.blm.gov/public_projects/63197/200115901/20037453/250043650/RawlinsBLMDraftBlowoutPenstemonACECPlan_March2021.pdf

Top: *Rhus aromatica* var. *aromatica* (fragrant sumac); Bottom: *Equisetum hyemale* (scouringrush). © Robert and Jane Dorn. See: https://wyndd.org/gallery/.

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Renewal and Ballot are Enclosed!

WYNPS News

2023 Elections: Check out a wonderful slate of candidates for the 2023 Board. Please cast your vote…and renew! You can do it by filling out and mailing the enclosed renewal form-and-ballot, or via PayPal (renewal) and sending the ballot in to wynps@wynps.org . Elections close 19 January 2023.

Mark Your Calendar: The 2023 WYNPS Annual Meeting/ Wildflower Walk will be June 16-18, based in Clark, WY, at the foothills of the Beartooth Mountains. Look for a complete registration form and agenda in the March newsletter.

WYNPS Board – 2022
President: Kristy Smith, Driggs, ID (smith.kristy217@gmail.com)
Vice-President: Maggie Eshleman (maggieeshleman@gmail.com)
Sec.-Treasurer: Dorothy Tuthill, Laramie (dtuthill@uwyo.edu)
Board-at-large: Paige Wolken, Cheyenne (paigewolken@yahoo.com) (2021-'22)
Greg Pappas, Laramie (gregory.pappas@usda.gov) (2022-'23)

Other Contacts:
Editor: Bonnie Heidel (bheidel@uwyo.edu)
Webmaster: Maggie Eshleman (maggieeshleman@gmail.com)
Sublette Chapter: Jill Randall, President (possum1b@yahoo.com)
Teton Plants: Amy Taylor, Treasurer; (tetonplants@gmail.com). Check the chapter homepage (https://tetonplants.org/) for events.

Teton Plants is teaming with Bird and Nature Club to feature nature programs every second Tuesday of the month through winter thanks to the co-sponsorship with the Teton County Library. There will be hybrid zoom/live programs. Check out the schedule at the Teton Plants homepage (above).

General questions: wynps@wynps.org

Social Media: We are on Facebook as Wyoming Native Plant Society and Instagram as @wyomingnativeplantsociety. Follow us on either platform for WYNPS updates and native plant content.

New Member: Mercedes Pepper, Pinedale.

Message from the Editor:

I find tremendous hope in Wyoming botanical discoveries and botanists who share them, in gardening clubs discovering new interests in native plants and sharing them, and in University institutions and research programs that collaborate to broaden information resources on native plants by improvements to scope and the collaboration itself. This issue is packed with hopeful signs and substance.

The only thing that gives me greater hope and pleasure are…the actual Wyoming native plants. Each of us has our own priorities and values. Each newsletter issue is an attempt to find native plant topics intersecting between our shared interests and hopes.

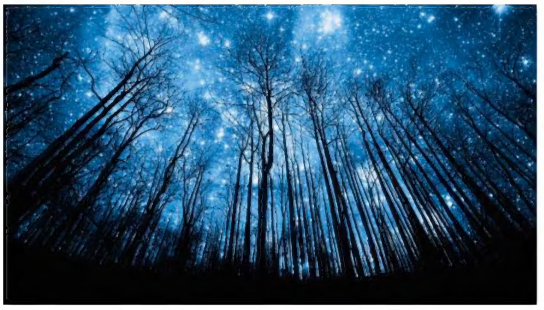
…Here's wishing you holidays and a new year abounding in hope. ~Bonnie Heidel

Treasurer's Report: Balance as of Dec 8: Scholarship = $1,985; General = $9,515; Total = $11,500.

Next issue: Please send articles and announcements for the next newsletter by 15 February to:

Wyoming Native Plant Society
P.O. Box 2449
Laramie, WY 82073

Contributors to this Issue: Bonnie Heidel, Nancy Loomis, Greg Pappas, Meredith Taylor and Dorothy Tuthill.



Fun Finds on the Medicine Bow National Forest

By Greg Pappas

Working as a Botanist for the Medicine Bow National Forest (MBNF), I have the pleasure of spending most summer days trekking around the woods, with eyes on the ground of course! I never cease to be amazed by the frequency of unique plants and habitats encountered. For botanists, a certain thrill comes from finding that rare species only seen in pictures or that spongy feeling beneath your feet as you step into a fen. Inspired by these types of moments, I wanted to share some of the fun finds from our botany program's 2022 field season, with the hope of sparking interest for botanical exploration across the state. With most of the finds, I collected a specimen to confirm and deposit at the Rocky Mountain Herbarium (RM). Herbarium specimens represent permanent and verifiable documentation of the occurrences. In instances where there were too few individual plants present such that collecting a specimen might pose a risk to the population, species verification was achieved by evaluating photos uploaded to iNaturalist. With iNaturalist, you can instantaneously share biological discoveries and receive community input. I have provided the iNaturalist link for each observation both within the text and listed at the end for convenience.

Mullen Fire finds. The first fun find came while scouting an area in the Snowy Range for an upcoming native plant walk with the University of Wyoming Extension. The site boasted a variety of species that had regenerated after the 2020 Mullen Fire. Along a narrow transition between dry shrubland slope and riparian wetland, I noticed a flowering *Adoxa moschatellina* (muskroot). This is only the second known occurrence of the plant in Albany County; the first being George Osterhout's 1897 collection from along the Laramie River near Colorado. This musky smelling herb is monotypic (i.e., it is the sole species in the genus *Adoxa*) and is easily identified by its unique cube-shaped flower clusters. I counted just a handful of individuals at the site, but *Adoxa* is a rhizomatous perennial, so it will be interesting to see if the small population expands over time.

One of our big tasks of the season was to conduct vegetation monitoring in the burn scar. In addition to observing several populations of cool post-fire colonizers such as *Iliamna rivularis* and *Geranium bicknellii* while en route to our research plots, I discovered new county records for two rare plants tracked as Species of Concern (SOC) by the Wyoming Natural Diversity Database (WYNDD)—both spotted right off trails! The first was *Penstemon cyathophorus* (sagebrush beardtongue), a regional endemic characterized by conspicuously exserted stamens. It was found in an unburned portion of a rocky, sagebrush shrubland in the south-central Snowy Range. This represents the first record of the plant from Albany County. Next was *Phacelia alba* (white phacelia), an annual herb distinguished by irregularly lobed leaves and flowers that contain exserted stamens and white petals with jagged-toothed margins. It was discovered in the western Snowy Range's Platte River Wilderness along a moderately burned ecotone between sagebrush-grassland and riparian willow-wetland. Previously known only from the southern Laramie Range and Laramie Basin in southeastern Wyoming, this represents the first record of *Phacelia alba* from Carbon County.

Left: *Senecio wootonii*, by Greg Pappas

Another notable find from the Mullen Fire was *Senecio wootonii* (Wooton's ragwort)—a species common in Colorado's middle-elevation forests but not previously documented from Wyoming. I spotted this one out the window of my truck! A quick search along the road revealed a moderate-sized population growing in the understories of a lightly burned lodgepole pine forest and adjacent unburned patch of aspen. This record from the southern Snowy Range represents a northward range extension for the species.

Wetland finds. If one were to ask if I had any tricks for finding rare plants, my first word of advice would be to check out every wetland possible! On the MBNF, these biodiversity hotspots tend to yield many more rare species per unit of land surveyed than their upland counterparts. Still, I was caught by surprise when I came upon two occurrences of *Athyrium filix-femina* (ladyfern) in the Snowy Range, as this fern has not previously been documented from the Medicine Bow Mountains. I found the first population in the northwestern Snowy Range at the head of a large spring complex, and the second in the east-central Snowy Range in a graminoid-dominated wetland among aspen and alder. This second population represents the first record from Albany County.
Another wetland find from the Snowy Range came as I was checking out some ponds on a whim. Part of the Sunken Gardens Special Interest Area, these ponds are located within a large wetland complex below a segment of Dry Park Road that is undoubtedly a visitor favorite for its spectacular view of Centennial Valley. I had driven by these ponds countless times without ever stopping to take a look, most likely because the drop from the road is extremely steep! But it turns out the slippery descent was worth it. Immediately when I reached the edge of the first pond, I noticed the distinctly clumped habit and long, linear inflorescences of *Carex diandra* (lesser panicled sedge). This is only the second record from Albany County and the first since 1962 for this U.S Forest Service-designated "Sensitive" species.

Now, if you want to get the most bang for your botanical buck when it comes to Sensitive species on the MBNF, the Pole Mountain Unit in the southern Laramie Range is the place to be. Although small in area, it is home to three Sensitive wetland plants: two willows (*Salix candida* and *Salix serissima*) and one aquatic, carnivorous herb (*Utricularia minor*). Although I did encounter multiple new occurrences of all three species this past summer, my most exciting finds from Pole Mountain were two graminoids that I had never seen before: *Juncus vaseyi* (Vasey's rush), an SOC ranked S1 (critically imperiled), and *Carex sartwellii* (Sartwell's sedge), an MBNF Species of Local Concern (SOLC) ranked S2 (imperiled). Both were found in wet meadow habitats, and each represents just the second known occurrence of the species in Albany County.

Cinnabar Park finds. Cinnabar Park in the central Snowy Range is a unique subalpine meadow popular with recreationists and researchers alike. It is also the only place in southern Wyoming where the Sensitive species, *Festuca hallii* (plains rough fescue), is known to occur. In June, I was happy to hear from a co-worker, Peter Ebertowski, that he had recently relocated this population that was first documented by Walter Fertig in 1998. Inspired by this news, I set out to visit and map the population. Meandering through the meadow in search of the rare fescue, I came across *Oreoxis alpina* (alpine oreoxis), a low, stemless herb not previously known from Cinnabar Park. *Oreoxis alpina* is an S1-ranked SOC that lies at the northern edge of its range-wide distribution in the Snowy Range. This new record represents the most western population in the Snowy Range. My search also revealed the locally abundant *Carex obtusata* (obtuse sedge), an upland, rhizomatous sedge with solitary spikes. This species was previously only known to occur in Albany County from a single record in the southern Laramie Range.

Collaborator finds. In July, our crew joined forces with the botany crew from Colorado's Routt National Forest to conduct rare plant surveys on the Laramie Peak Unit in the northern Laramie Range. Surveying here is always a blast—scrambling over large granite outcrops in search of plants like the endemic Aquilegia laramiensis (Laramie columbine) or the rare *Dichanthelium linearifolium* (slimleaf panicgrass). The bouldery landscape often feels like uncharted territory, with each ledge, crevice, and overhang offering the potential for some exciting discovery. This proved true for Peter Ebertowski from the Routt crew, who discovered a population of *Polystichum scopulinum* (mountain hollyfern), a species considered possibly extirpated in Wyoming. This fern, which can be distinguished from the similar *P. lonchitis* by having some leaflets with bases divided into lobes, was previously only known from the northwest corner of the state in Teton County and last observed in 1930. Thus, in addition to confirming its presence in Wyoming, this record represents an eastward extension of its main distributional range (i.e., excluding some disjunct populations from eastern Canada).

One of my favorite finds happened during our "*Botrychium* hunting" day with Rocky Mountain Herbarium's Ben Legler. *Botrychium* (moonwort or grapefern) is a genus of small, spore-bearing plants. Often rare or easily overlooked, they are notoriously elusive in the field.

Botrychium echo, by Greg Pappas

You know this to be true when you realize your survey technique has morphed into a crawl!

Though I'm normally an optimist, I was secretly convinced (along with my co-workers no doubt) that we weren't going to find any moonworts as we deliberately searched the areas of suitable habitat Ben had selected. But sure enough, Ben proved us wrong when he found a small population of *Botrychium echo* (echo moonwort)—a species Ben suspected to occur in Wyoming but not yet documented from the state. The site was a north-facing slope in an open, subalpine spruce-fir forest. After thorough investigation, we found the site contained a second, tiny, *Botrychium* species, which Ben thought was most likely *B. furculatum*. As it is common for multiple *Botrychium* species to grow together at the same location, this second find didn't involve an incredible stroke of luck, but two moonworts are better than one!

As I reflect on these and other interesting finds from the past summer, I am reminded of the critical need to maintain diverse and intact native plant communities, particularly amid the current slew of pressures facing our cherished public lands. At the same time, these finds serve as a simple reminder that exciting discoveries await, we just need to get out there and explore!

Information Summary

Adoxa moschatellina — Link: https://www.inaturalist.org/observations/121195029 . Notes: Second known occurrence in Albany County; first since 1897. Rank: G5/S2. Status: MBNF SOLC. Specimen collected for RM: No.

Penstemon cyathophorus — Link: https://www.inaturalist.org/observations/124073964 . Notes: First known occurrence in Albany County. Rank: G3/S2. Status: WYNDD SOC, MBNF SOLC. Specimen collected for RM: Yes.

Phacelia alba — Link: https://www.inaturalist.org/observations/129381318 . Notes: First known occurrence in Carbon County. Rank: G4G5/S1. Status: WYNDD SOC, MBNF SOLC. Specimen collected for RM: No.

Senecio wootonii — Link 1: https://www.inaturalist.org/observations/121366231 . Link 2: https://www.inaturalist.org/observations/122432198 . Notes: New addition to the state flora. Rank: G4. Status: N/A. Specimen collected for RM: Yes.

Athyrium filix-femina — Link 1: https://www.inaturalist.org/observations/129243238 . Link 2: https://www.inaturalist.org/observations/133881838 . Notes: First known occurrences from the Medicine Bow Mountains in Wyoming. The second population is the first known occurrence in Albany County. Rank: G5T5/S2. Status: MBNF SOLC. Specimens collected for RM: Yes.

Carex diandra — Link: https://www.inaturalist.org/observations/133422599 . Notes: Second known occurrence in Albany County; first since 1962. Rank: G5/S2. Status: WYNDD SOC, Forest Service Sensitive. Specimen collected for RM: Yes.

Juncus vaseyi — Link: https://www.inaturalist.org/observations/135858213 . Notes: Second known occurrence in Albany County. Rank: G5/S1. Status: WYNDD SOC, MBNF SOLC. Specimen collected for RM: Yes.

Carex sartwellii — Link: https://www.inaturalist.org/observations/137749157 . Notes: Second known occurrence in Albany County; first since 1964. Rank: G5/S2. Status: MBNF SOLC. Specimen collected for RM: No.

Oreoxis alpina — Link: https://www.inaturalist.org/observations/124306289 . Notes: Not previously known from Cinnabar Park; most western population found in the Medicine Bow Mountains. Rank: G4G5/S1. Status: WYNDD SOC, MBNF SOLC. Specimen collected for RM: Yes.

Carex obtusata — Link: https://www.inaturalist.org/observations/137791397 . Notes: First known occurrence from the Medicine Bow Mountains in Wyoming. Rank: G5/S3. Status: N/A. Specimen collected for RM: Yes.

Polystichum scopulinum — Link: https://www.inaturalist.org/observations/128530070 . Notes: Discovered by Peter Ebertowski. Considered possibly extirpated in Wyoming and previously only known from the northwest corner of the state (last observed in 1930). Rank: G4/SH. Status: WYNDD SOC, MBNF SOLC. Specimen collected for RM: Yes.

Botrychium echo — Link: https://www.inaturalist.org/observations/140705649 . Notes: Discovered by Ben Legler. First known occurrence in Wyoming. Rank: G4. Status: MBNF SOLC. Specimen collected for RM: No.

Native Plant Scavenger Hunt
By Nancy Loomis

In the fall of 2021, the newly formed Laramie County Master Gardeners (LCMG) Native Plant Committee was looking to create a native plant activity for the upcoming summer. Most of the committee members were native plant neophytes so they wanted their venture to include basic exploration and identification of native plants in Laramie County. The ultimate goal was to start identifying blooming forbs, document their locations and return later to collect seed. The seed was to be utilized to propagate plants for a long-term urban project site.

The committee spent the winter months familiarizing themselves with online resources such as the Rocky Mountain Herbarium (RM) database. While investigating it we discovered William (Bill) Edwards' 1983 collection from the Laramie County Community College (LCCC) campus (1). The committee utilized Edwards' data to create a "Native Plant Scavenger Hunt" (2). The objective of the scavenger hunt was simple; locate and document native forbs from the original 1983 collection that are still growing on the college campus.

The forb list was uploaded to the LCMG website with links to photo/information sites to help with identification of the plants (3). Participants were encouraged to photo document their sightings on iNaturalist's "LCCC Campus" project (4). The hunt began May 15th and ended August 30th. Early in the scavenger hunt it was discovered that the medians located between College Drive and J.O. Reed Way remain as little pockets of shortgrass prairie. Almost 90% of the 40 species we located were found in those strips. We also documented 12 species not included in Edwards' collection.

During the hunt, committee members became particularly interested in collecting seed from three species. The striking blue flowers on the diminutive *Penstemon angustifolius,* along with its early bloom time made this plant very enticing. *Astragalus tridactylicus*' low-growing and spreading nature made it an attractive ground cover throughout the dry hot summer. It produced an early flush of purple blooms and a minor re-bloom in the fall, adding to its desirability. *Dalea candida* var. *oligophylla* had distinctive features that we had not encountered in commercially grown varieties—the plants found on campus grew prostrate and had vivid red stems. We think this variety might make an interesting ground cover.

Astragalus tridactylicus © B. Heidel See: https://wyndd.org/gallery/.

The committee was not successful in collecting seed from the first two plants. The flower heads of *P. angustifolius* were mechanically removed before going to seed. Although several return trips were made to the *A. tridactylicus* plants, no seed pods were located for collection. A minimal amount of seed was collected from *Dalea candida* var. *oligophylla*, due to an ongoing battle of "timing" versus "critter consumption". We were also able to collect seeds from several other plants on the scavenger hunt list and are currently researching their propagation protocols. Most of us have propagated native plants from seed acquired through commercial nurseries, but we are discovering there are limited documented propagation protocols for our harvested species. The winter months will be spent experimenting and documenting various propagation techniques with our collected seed.

We reached out to LCCC to discuss the future of the shortgrass prairie medians. We hope to form a collaborative effort to preserve the native forbs growing there. Next summer we will try to collect the elusive seed from *P. angustifolius* and *A. tridactylicus*.

Literature Cited

(1) http://rmh.uwyo.edu/data/results.php?Polygon=&Zoom=&Herbarium=&Project=&Accession=&Barcode=&Family=&Genus=&Species=&Subtaxon=&Collector=Edwards&CollNum=&Day=&Month=&Year=&Country=&State=Wyoming&County=Laramie&Locality=Laramie+County+Community&MinElev=&MaxElev=&Sort1=SASName1&Limit=100&Submit=Search+Specimens

(2) https://www.lcmg.org/native-plants/native-plant-scavenger-hunt-introductory-page/

(3) https://www.lcmg.org/native-plants/native-plant-scavenger-hunt-plant-list/

(4) https://www.inaturalist.org/projects/lccc-campus

Ethnobotany – Part 4. ***Typha latifolia***

By Meredith Taylor, Certified Wyoming Naturalist

Left: *Typha latifolia*, © Ben Legler

See: https://wyndd.org/gallery/.

Cattails are a monocotyledonous, perennial plant of many uses. Native to North America, broadleaf cattail (*Typha latifolia*) has been referred to as the "Supermarket of Edible Plants," with every part of the plant being safe to eat. Montana Public Radio published a feature in 2018 titled - Cattail: Plant of a Thousand Uses.

Cattails are found in wetlands where they grow with a tall, straight stalk. The brown head at the top of the stem is made up of the dense female flowers. A thin yellow spike above the female flowers has the staminate or male flowers. Cattails readily spread throughout riparian wetlands both by their rhizomatous roots and by wind-blown seeds when the head opens in the fall. The cattail's basal leaves are flat measuring 10-20 mm (⅜-¾ in) wide and 1-3 m (3-10 ft) tall. There are 12-16 leaves on each shoot.

Wyoming is also home to *Typha angustifolia*, a species thought to have been introduced from Europe. *Typha angustifolia* differs from *T. latifolia* in having more narrow leaves - 5-12 mm (¼-½ in) - and in having a gap between the female and male flowers. It can be used in all of the same ways as *T. latifolia*.

Native Americans may have used cattails for many purposes to:

1. Provide food, as tender, young shoots are delicious to eat like asparagus raw or cooked as a source of Vitamins A, B and C, potassium and phosphorus. Pollen on the male cattail flower may be gathered in summer to use as a high protein flour. The young green flower head is delicious roasted and eaten like corn on the cob. The pollen may be gathered easily by shaking the male flower in a bag leaving the plant in place.
2. Provide raw materials using its leaves to make baskets, cord, mats, hats and shelters. The downy seeds' fluff is harvested in the fall for use as insulation, poultice, fire starter and sanitation.
3. Provide medicinal sap from the roots as applide topically to wounds, burns and toothaches as antiseptic and anesthetic. Cattails were also used for treating coughs and abdominal ailments.

Caution - Cattails should not be collected from polluted, roadside areas. They may also be confused with similar-looking, but poisonous lily, orchid or iris plants in spring.

As if that weren't enough, cattails contribute to the health of aquatic systems in that they:

1. Improve aquatic habitat of wetlands for birds, amphibians, reptiles and other native animals;
2. Protect stream banks from erosion by reducing water flow;
3. Increase water quality by filtering pollutants and stabilizing sediment and silt where they grow.

Harvesting the cattail shoots should be done sustainably in a small area by snapping off the shoot at the water level rather than pulling or digging up the roots. This method of harvest leaves the roots of the plant to continue growing sustainably in the future.

Literature Cited

Kershaw, L. 2000. Edible and Medicinal Plants of the Rockies. 2000. Lone Pine Press.

Montana Public Radio. 2018. https://www.mtpr.org/arts-culture/2018-04-02/cattail-plant-of-a-thousand-uses

Editor's note: This article is for educational purposes and does not condone collecting of plants that readers cannot identify with certainty. Ethical wild plant collecting follows practices that tread lightly. See an outline of those practices as posted in: Http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3822046.pdf .

Check directly with the agency about their policies if you want to harvest native plants on public lands.

Celebrating Landmarks in Wyoming Botany

YOU are invited to a **Celebration of the 100th Anniversary of the Aven Nelson Building** at University of Wyoming, Laramie. It will be on January 26, 2023 – check the Rocky Mountain Herbarium homepage for the time and details (https://www.rockymountainherbarium.org/).

- Presentation on the life and times of Aven Nelson, founder of the Rocky Mountain Herbarium and 11th President of the University of Wyoming, by Aspen Brown, UW Department of History
- Stories from the Stacks exhibit
- Tours of the Herbarium

WYOMING NATIVE PLANT SOCIETY MEMBERSHIP FORM

Date _____

Name _____

Address _____

Email _____

Please check all appropriate boxes:

[ ] New member
[ ] Renewing member
[ ] Check here if this an address change
[ ] Annual membership with email notification of newsletters: $10
[ ] Annual membership with mailed newsletters: $12
[ ] Annual membership with scholarship support and email notification of newsletters: $20
[ ] Annual membership with scholarship support and mailed newsletters: $22
[ ] Life membership with email notification of newsletters: $300
[ ] Life membership with mailed newsletters: $300

In addition to the statewide organization, we have two chapters. Membership in chapters is optional; chapter members must also be members of the statewide organization.

[ ] Teton Plants Chapter annual membership: $5
[ ] Sublette Chapter annual membership: $5
[ ] Additional donation of $_____

Total enclosed: _____

Please write checks to **Wyoming Native Plant Society**

Wyoming Native Plant Society
P.O. Box 2449
Laramie, WY 82073

Wyoming Native Plant Society – Renewal and Ballot

Return to: Wyoming Native Plant Society – P.O. Box 2449 – Laramie, WY 82073 by 19 January!

Name _____ Date_____
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Please check all appropriate boxes:

[ ] New member
[ ] Renewing member

[ ] Check here if this an address change

[ ] Annual membership with email notification of newsletters: $10
[ ] Annual membership with mailed newsletters: $12
[ ] Annual membership with scholarship support and email notification of newsletters: $20
[ ] Annual membership with scholarship support

In addition to the statewide organization, we have two chapters. Membership in chapters is optional; chapter members must also be members of the statewide organization.

[ ] Teton Plants Chapter annual membership: $5
[ ] Sublette Chapter annual membership: $5

[ ] Additional donation of $_____

Total enclosed: _____

Please write checks to:
Wyoming Native Plant Society

2023 WYNPS BALLOT – Please mail for arrival by **January 19** or email your vote to: wynps@wynps.org . Please vote for one person for each position.

President ____ Kristy Smith (Driggs, ID) Secretary/Treas. ____ Dorothy Tuthill (Laramie)
Vice President ____ Joyce Evans (Fort Laramie) At-Large (1rst year of 2-yr term) ____ Heidi Anderson (Gardiner)

[The second Board member At-Large position, on the 2nd year of a 2-yr term, is held by Greg Pappas (Laramie).]
Write-in candidate: _____ **Thank you** to Paige Wolken and Maggie Eshleman for Board contributions in 2022!

Candidate Biographies

Kristy Smith is running for a second term as President after a lively first year in office.

Joyce Evans is a native of Carbon County who spent her professional career providing speech and language therapy services to people of all ages. After a ranching life of over 50 years, she retired to the relative chaos of the little town of Fort Laramie, where she tends a native plant garden and generally disrupt people's expectations of the elderly by serving as mayor.

Heidi Anderson has worked in Yellowstone National Park as a Botanist for over 20 years. She writes restoration plans and surveys wetlands. She backpacks in her spare time and though she generally avoids questions about her favorite plant, admits a penchant for curly cup gumweed (*Grindellia squarrosa*).

Dorothy Tuthill is Associate Director and Educational Coordinator at the Biodiversity Institute (BI). She holds a PhD in Botany from the University of Wyoming. On behalf of BI, she is on the Rocky Mountain Herbarium Management Team and Natural Science Collections Partnership.

Wyoming Native Plant Society

2023 MARKOW SCHOLARSHIP/SMALL GRANT

Applications are due February 15, 2023. Awards will be made in April, 2023.

Electronic copies of this application are also posted on the WYNPS homepage at: www.wynps.org

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The Wyoming Native Plant Society promotes appreciation, understanding and conservation of native plants and plant communities through its annual scholarship/small grants program. For scholarships, thesis research may address any aspect of botany including floristics, taxonomy, ecology, genetics, plant geography, range science, paleontology, pollination biology, physiology, and mycology. For small grants, projects such as botany curriculum development, public native plant gardens, and other outreach will be considered. **This competition is open to all grad students who conduct research in Wyoming, residents of Wyoming or members of WYNPS.**

Proposals must pertain to native plants/vegetation of Wyoming. Preference will be given to proposals expected to generate research data or promote public understanding. Up to $1,000 may be covered for a scholarship proposal, and up to $500 for a small grant proposal. *Awards defray direct project costs, excluding labor or conferences*. Eligible expenses include:

1. Direct costs of travel, meals, and lodging for research or education projects.
2. Supply and service expenses used for the sole purpose of the project (e.g., consumable supplies such as laboratory chemicals, soil and nursery stock, and services such as phone and computer time).

The deadline for proposals is February 15. Awards will be announced in April. The proposal should be no longer than three pages and include the following:

- Name, mailing address, telephone number (land &/or cell as appropriate) and email address of the applicant.
- Name, mailing address, contact person's name & phone number for any organization that will be directly involved with the applicant when executing the proposal.
- Short abstract of the study or project (2-5 sentences).
- Description of the study or project: objectives, methods, description of final product, and short description of past similar work (if applicable). Garden proposals should include plant lists, an educational component, and explicitly address long-term maintenance.
- Description of how the study or project will benefit native plants or plant conservation in Wyoming.
- Overall budget showing amount requested from WYNPS ($1,000 or less), the intended purpose of the funding, and other funding sources.
- Timeline for completion of the major components of the study or project.
- Brief statement of applicant's qualifications or biography.
- Name, address, email address or phone number of two people as references.

Successful scholarship or grant recipients will be required to submit a final report (due no later than February 15, 2024) as an article about the study or project, printed in our *Castilleja* newsletter.

Please send completed applications to: Wyoming Native Plant Society, P.O. Box 2449, Laramie, WY 82073; or wynps@wynps.org .